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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,260

04/13/2005

James Scott Tarbell

4450-15

4670

23117

7590

02/15/2008

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EXAMINER

CHOI, YUK TING

ART UNIT

PAPER NUMBER

2164

MAIL DATE

DELIVERY MODE

02/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/531,260		TARBELL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Yuk Choi		2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 46-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/2005;12/2/2006</u>                                       | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

1. Application No: 10/531,260 filed on 04/13/2005 has been examined. Claims 46-93 are pending in this Office Action.

***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C.119(a)-(d).

***Drawings***

3. The drawings were received on 11/23/2005. These drawings are accepted by the Examiner.

***Information Disclosure Statement***

4. The Information Disclosure Statement (IDS) received Apr.13, 2005 and Dec. 22, 2006. See attached PTO-1449(s).

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 90 and 91 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F. 3d at 1373, 47 USPQ2d at 1602-02.

In claims 90 and 91, an "a software" is being recited. A computer program is a set of instructions capable of being executed by a computer; the computer program itself is not a

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process. Therefore, it is not in the statutory categories.

### ***Claim Objections***

7. Claims 46-67 are objected to because of the following informalities: "method" is suggested to change to -computer implemented method-.

Appropriate correction is required

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 65, 55, 89, 91 and 93 are rejected under 35 U.S.C. 102(e) (Effective Filing Date: Oct. 14, 2002) as being anticipated by Bills (US PA Pub 2003/0204479 A1, Effective Date: Apr. 25, 2002).

**Referring to claim 65**, Bills discloses a method of journaling changes to system objects including the steps of: v) executing a system function during which changes to system objects occur (*See par 12, lines 4-8 and par 31, lines 1-3, executing an operating system routine when system objects changes*); and vi) journaling changes to system objects during execution of the system function (*See par 6, lines 8-10, journaling objects changes*).

**As to claim 66**, Bills also discloses a method as claimed in claim 65 wherein changes of system objects are journal by integrating journaling commands into the code of the system

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functions( *See par 31, lines 1-5, the journaling routine is a program included in the operating system modules*).

**As to claim 89**, Bills also discloses a computer system for effecting the method of claim 65 (*See par 24, lines 1-4*).

**As to claim 91**, Bills also discloses software for effecting the method of claim 65 (*See par 28, lines 6-8*).

**As to claim 93**, Bills also discloses storage media containing software as claimed in claim 91 (*See par 28, lines 5-6, computer-readable media provides storage*).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 46-56, 62-64, 68-78 and 84-88, 90 and 92 are rejected under 35 U.S.C. 103(a) (Effective Filing Date: Oct. 14, 2002) as being unpatentable by Tanaka (US Patent 6,665,735, Effective Date: Oct. 5, 1998) in view of Bills (US PA Pub 2003/0204479 A1, Effective Date: Apr. 25, 2002).

**Referring to claim 46**, Tanaka discloses i) substituting a dummy function for a system function (*See col 3, lines 60-65 and col 2, lines 48-55, replacing external or supplemental function for an operating system function*); ii) executing the system function under operation of

the dummy function (See col 2, lines 59 and col, 6 and lines 32, executing the external or supplemental function or process) and iv) changed by execution of the system function and completing execution of the dummy function (See col 6, lines 8-11, changed the original function func1 execution and completing execution of external or supplemental function func2).

Tanaka does not explicitly disclose a method of journaling changes to system objects iii) generating copies of system objects for journaling.

Bills discloses disclose a method of journaling changes to system objects iii) generating copies of system objects for journaling (See par 6, lines 8-11, keeping a record of changes made of objects that are journaled and other events that occur in the system).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: generating copies of system objects for journaling, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (See par 6, lines 3-9).

**As to claim 47,** Tanaka also discloses the dummy function substitutes the system function by having a duplicate calling name and pre-empting the execution of the system function (See col 2, lines 53-58, functions having the same names as the replaced function is executed in place of an original system function).

**As to claim 48,** Tanaka also discloses a method wherein an exit point is associated with the dummy function and an exit program registered for the exit point (See col 7, lines 55-65, when original system func1 is called, the original system func1 routine passed control to the

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*external or supplement func1, the external or supplement func1 takes control and adds the new routine or exit program for execution).*

**As to claim 49,** Tanaka also discloses a method wherein during operation of the dummy function the exit program is executed (*See col 7, lines 60-65 and col 6, lines 8-10, executing the external or supplement routine which added to original system function, whereas that external or supplement routine is a program).*

**As to claim 50,** Tanaka also discloses a method wherein the execution of the system function is handled by the exit program (*See col 7, lines 55-65, when original system func1 is called, the original system func1 routine passed control to the external or supplement func1, the original system func1 is handled by the external or supplement func1 routine or program).*

**As to claims 51 and 52,** Tanaka discloses the exit program (*See col 7, lines 50-65, the original system func1 routine passed control to the external or supplement func1 and executed the external or supplement routine which added to original system function, whereas that external or supplement routine is a program).*

Tanaka does not explicitly disclose a program captured the system objects and generates copies of the system objects.

Bills discloses the program captured the system objects and generates copies of the system objects (*See par 6, lines 8-11, capturing a record of changes made of objects that are journaled).*

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: captured the system objects and generates copies of the system objects, as taught by Bills, in order to maintains data integrity in

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the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (See par 6, lines 3-9).

**As to claim 53**, Tanaka also discloses the execution of the system function is handled by the dummy function (See col 7, lines 55-65, *when original system func1 is called, the original system func1 routine passed control to the external or supplement system func1, the original system func1 is handled by the external or supplement system func1 routine*).

**As to claims 54 and 55**, Tanaka discloses the dummy function and exit program (See col 7, lines 50-65, *the original system func1 routine passed control to the external or supplement func1 and executed the external or supplement routine, whereas that external or supplement routine is a program*).

*Tanaka does not explicitly disclose the function captured system objects and generated copies of the system objects.*

Bills disclose the function captured the system objects and generates copies of the system objects (See par 6, lines 8-11 and par 24, lines 4-5, *capturing a record of changes made of objects that are journaled*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: captured the system objects and generates copies of the system objects, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (See par 6, lines 3-9).



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**As to claim 56**, Tanaka does not explicitly disclose wherein the copies of the system objects are saved to disk.

Bills disclose the copies of the system objects are saved to disk (*See par 12, lines 5-7 and par 27, lines 10-15, journaling the system objects and stored them in a disk*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: copies of the system objects are saved to disk, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (*See par 6, lines 3-9*).

**As to claim 62**, Tanaka in view of Bills also disclose the system objects are one or more of the set of program objects, configuration objects, queues, and space/memory mapped objects (*See Bills, par 7, lines 4-6*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: disclose the system objects are one or more of the set of program objects, configuration objects, queues, and space/memory mapped objects, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (*See par 6, lines 3-9*).

**As to claim 63**, Tanaka in view of Bills also disclose the changed system objects are those system objects that have been created, changed or deleted (*See Bills, par 5, lines 2-3 and par 6, lines 9-10, objects are created, generated, deleted and changed*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: the changed system objects are those system objects that have been created, changed or deleted, as taught by Bills; in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (*See par 6, lines 3-9*).

**As to claim 64**, Tanaka in view of Bills inherently discloses wherein the system functions are OS/400 system functions (*See Bills, par 31, lines 1-2, the system functions are operating system functions, and one ordinary skill would recognize that operating system can be OS/400*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: the system functions are operating system functions, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (*See par 6, lines 3-9*).

**Referring to claim 68**, Tanaka discloses a system for journaling changes to system objects including: vii) a processor (*See col 3, lines 60-64, a CPU processor, also see Fig. 1, item 1*) adapted to execute a dummy function in place of a system function (*See col 3, lines 60-65 and col 2, lines 48-55, replacing external or supplemental function for an operating system function*) wherein the dummy function executes the system function (*See col 2, lines 59 and col, 6 and lines 32, executing the external or supplemental function or process* and viii) memory for use by the processor during execution (*See col 3, lines 60-64, a main memory for use by the CPU processor and Fig. 1, item 2*).

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Tanaka does not explicitly disclose generates copies of system objects for journaling.

Bills discloses disclose generates copies of system objects for journaling (*See par 6, lines 8-11, keeping a record of changes made of objects that are journaled and other events that occur in the system*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: generates copies of system objects for journaling, as taught by Bills, in order to maintains data integrity in the event of an operating system crash or if the operating system is halted abnormally. When a system crash occurs, any lost data can be reconstructed from the information contained in the journal (*See par 6, lines 3-9*).

**As to claims 69-78**, they recite essentially the same limitations as claims 47-56; therefore, they are rejected based on the same reasons as set forth in claims 47-56.

**As to claims 84-86**, they recite essentially the same limitations as claims 62-64; therefore, they are rejected based on the same reasons as set forth in claims 62-64.

**As to claim 87**, Tanaka in view of Bills inherently discloses wherein the processor is operating under the OS/400 operating system (*See Bills, par 31, lines 1-2, the system functions are operating system functions, and one ordinary skill would recognize that operating system can be OS/400, also see col 5, lines 4-5, processing unit*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: the processor is operating under the operating system, as taught by Bills, in order to control system operation.

**As to claim 88**, Tanaka also discloses a computer system for effecting the method of claim 46 (*See col 3, lines 60-61*).

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**As to claim 90**, Tanaka also discloses software for effecting the method of claim 46(See *col 3, lines 25-26*).

**As to claim 92**, Tanaka also discloses storage media containing software as claimed in claim 90 (See *col 4, lines 13-15, the software is installed in main memory ROM storage device*).

12. Claims 57-59 and 79-81 are rejected under 35 U.S.C. 103(a) (Effective Filing Date: Oct. 14, 2002) as being unpatentable by Tanaka (US Patent 6,665,735, Effective Date: Oct. 5, 1998) in view of Bills (US PA Pub 2003/0204479 A1, Effective Date: Apr. 25, 2002) and further in view of Owen (US PA Pub 2003/0217031 A1, Effective Date: May. 16, 2002).

**As to claim 57**, Tanaka in view of Bills do not explicitly disclose the copies of the system objects are streamed to a database system for journaling.

Owen discloses the copies of the system objects are streamed to a database system for journaling (See *par 34, lines 1-3 and lines 8-14, sending the journal entries to the journal receiver and send to target system, then applies the journal entries to the target system, see also par 35, lines 7-8 and Fig. 5*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise: the copies of the system objects are streamed to a database system for journaling, as taught by Owen, in order to send journal entries from one system to another to assure data integrity of the information system (See *par 6, lines 1-3*).

**As to claim 58 and 59**, Tanaka in view of Bills do not explicitly disclose the database system is incorporated with a replication system, replicates the copies of the system objects to one or more local or remote databases.

Owen disclose the database system is incorporated with a replication system, replicates the copies of the system objects to one or more local or remote databases (*See par 34, lines 13-18 and Fig. 5, replicating the received journal entries from the journal applying software, the replicated files are reflected in local database*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise the database system is incorporated with a replication system, replicates the copies of the system objects to one or more local or remote databases, as taught by Owen, in order to send journaled changes from one system to another to assure data integrity of the information system and to minimize excessive journal data that need to be send (*See par 6, lines 1-6*).

**As to claims 79-81**, they recite essentially the same limitations as claims 57-59; therefore, they are rejected based on the same reasons as set forth in claims 57-59

13. Claims 60, 61, 82 and 83 are rejected under 35 U.S.C. 103(a) (Effective Filing Date: Oct. 14, 2002) as being unpatentable by Tanaka (US Patent 6,665,735, Effective Date: Oct. 5, 1998) in view of Bills (US PA Pub 2003/0204479 A1, Effective Date: Apr. 25, 2002) and further in view of Suzuki (US Patent 6,829, 768 B1, Effective Date: Sept. 29, 1998).

**As to claims 60 and 61**, Tanaka in view of Bills do not explicitly disclose wherein messages or exceptions generated by the system function are captured into a queue and the messages or exceptions are forward back to the process by a function.

Suzuki discloses messages or exceptions generated by the system function are captured into a queue and the messages or exceptions are forward back to the original process, (*See col 1, lines 50-60 and col 4, lines 33-37, the adaptor function has a queue manager to*

*captured messages in a queue and forward back to the SDL process, the SDL process is executing operation system tasks).*

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise messages or exceptions generated by the system function are captured into a queue and the messages or exceptions are forward back to the process by a function, as taught by Suzuki, in order to integrate an external or supplement environment with an original system environment to expand the operations or library of the original system environment and maintain communication between the two environments (*See col 1, lines 20-22 and lines 42-27*).

**As to claims 82 and 83**, they recite essentially the same limitations as claims 60 and 61; therefore, they are rejected based on the same reasons as set forth in claims 60 and 61

14. Claim 67 is rejected under 35 U.S.C. 103(a) (Effective Filing Date: Oct. 14, 2002) as being unpatentable by Bills (US PA Pub 2003/0204479 A1, Effective Date: Apr. 25, 2002) in view of Cloud (US Patent 6,253,369 B1, Effective Date: Jun. 26,2001).

**As to claim 67**, Bills does not explicitly disclose wherein changes to system objects are journeyed by associating exit points.

Cloud discloses changes to system objects are journaled by associating exit points with the system function and calling an exit program during execution of the system function (*See col 8, lines 27-30 and lines 35-38, allows to custom user exit points for journaling and calling a custom-coded program during executing the system workflow*).

Hence, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Tanaka's system to comprise journaled by associating exit points

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with the system function and calling an exit program during execution of the system function, as taught by Cloud, in order to permit integration of two different system environment with a minimum of integration effort (*See col 3, lines 20-23*).

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuk Choi whose telephone number is (571) 270-1637. The examiner can normally be reached on 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

yc

Yuk Choi  
Patent Examiner  
Jan, 31, 2008

  
SATHYANARAYAN PANNALA  
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